THE CLIPPER GROUP
Navigator™
Navigating Information Technology Horizons℠
Published Since 1993 Report #TCG2003014 April 17, 2003

NetApp Etches in Stone — Offers New Disk-Based WORM Capability

Analyst: Michael Fisch

Regulations Drive Data Retention

Sarbanes-Oxley, USA Patriot Act, HIPPA, SEC Rule 17a-4, and many other regulations have raised the topic of data retention to the forefront of the corporate conscious. These regulations apply to different industries and aspects of business, but they **all require archiving data for specified periods of time**. This includes electronic documents like e-mail, spreadsheets, and instant messaging. Organizations must have effective procedures for records management, or they may risk serious fines and legal liability. As a result, executive management is paying more attention to this area.

Some requirements are stricter and more explicit than others. In particular, the Securities Exchange Commissions (SEC) Rule 17a-4, which applies to companies that trade in securities, specifies non-erasable and non-rewritable media. The agency wants to ensure that if it investigates a company, the records produced are full and complete, not altered in any way. This kind of permanent media is referred to as Write-Once-Read-Many (WORM), and it historically has meant optical media and special forms of tape. However, NetApp has brought this capability to a disk-based solution.

NearStore Adds WORM Capability

NetApp announced a new WORM capability called *SnapLock* for its *NearStore* online backup and archiving system.[1] NearStore is a NAS platform that uses low-cost ATA drives in large 12 and 24 TB arrays, offering a list price as low as $0.01/MB. It delivers a secondary tier of storage that falls in between production storage and tape systems, in terms of price and performance. Applications can access data through standard file system protocols like NFS and CIFS. NearStore is designed for long-term, online retention of reference data, and SnapLock adds to its attractiveness in this regard by supporting more stringent regulations, like SEC 17a-4. **This expands the areas where NearStore is an appropriate fit.**

SnapLock is essentially an incremental software feature for NearStore. NetApp's high-performance *WAFL* file system manages the WORM volumes in a NearStore platform, which can contain both standard and WORM volumes. An application designates a file as read-only when it is stored, and then WAFL ensures the file is not changed or deleted. **It becomes etched in stone, so to speak, and even the administrator cannot delete or change it.** Neither can the administrator destroy WORM volumes or move directories in a NetApp WORM volume.

[1] See *Network Appliance Breaks New Ground for Business Continuance with the NearStore R100* in **The Clipper Group Navigator** dated March 18, 2002, at www.clipper.com/research/TCG2002009.pdf.

Applications must be integrated with NearStore to support SnapLock, and NetApp is working with a number of ISVs (e.g., Legato, KVS, and Documentum) in application areas like e-mail archival and document management. The application modification is relatively simple since it is done within standard file protocols. In fact, **this is one of NearStore's advantages – it does not require applications to write to a proprietary API, avoiding a potential vendor lock-in situation.** It is also faster and easier to search and retrieve data in a disk-based file system, especially when compared to the traditional optical media and tape solutions.

As a future enhancement, NetApp is developing an expiration-date feature for WORM files. The expiration date will be set when the file is stored, and files can be deleted after the time period has elapsed.

Records Management

WORM is just one aspect of the broader issue of records management. Generally speaking, all enterprises should adopt a reasonable and defensible policy for preserving records, including digital and paper assets. Keep in mind the following:

- **The policy is determined by regulatory compliance and the operational and tax needs of an enterprise.** An insurance company or securities brokerage will need a more sophisticated records management system than a flower shop, but the principle remains the same. WORM may play a part, depending on requirements.
- **Storing data safely is only half the task – the objective is to be able to quickly and easily retrieve it when necessary.** If it takes three IT staff and two months of calendar time to search for and retrieve particular information from the archive, then there is a problem. This is not only costly, but long delays can be a liability. Archiving is about time-to-find (and cost), and data should be indexed, searchable, and accessible in a relatively short timeframe. This is a major reason why disk-based archival platforms like NearStore have become so attractive. ATA disk arrays are less expensive than optical jukeboxes and much faster and accessible than tape.
- **Periodic tape backups for disaster recovery purposes are not adequate for archiving and subsequent retrieval.** Accessing the data would require restoring the entire IT system, if the system model or version even exists anymore, plus attempting to search the data. It can be quite costly and time-consuming. Whatever system you use (hierarchical storage management, document management, e-mail archival), it should be geared specifically for archiving.
- **The policy should encompass data management through its lifecycle – from creation to maintenance to disposal.** While keeping data is a necessity, keeping it indefinitely is not. Aside from maintenance costs, old data can be a liability. If it exists, an enterprise may have to produce it in a legal discovery process. A better approach is to dispose of data after an appropriate length of time, based on legal policy. NetApp's future release of the expiration-date feature will be useful in this regard.

Conclusion

SnapLock gives another reason to consider NearStore for online, disk-based archiving. Not all organizations need WORM capabilities, but it is typically a *must-have* for those that do. **If you require non-erasable, non-rewritable storage, NearStore with SnapLock is an attractive alternative to optical and tape technologies, offering a balance of fast access, cost-effectiveness, and scalability.**

About The Clipper Group, Inc.

The Clipper Group, Inc., is an independent consulting firm specializing in acquisition decisions and strategic advice regarding complex, enterprise-class information technologies. Our team of industry professionals averages more than 25 years of real-world experience. A team of staff consultants augments our capabilities, with significant experience across a broad spectrum of applications and environments.

- ***The Clipper Group can be reached at 781-235-0085 and found on the web at www.clipper.com.***

About the Authors

***Michael Fisch* is Director of Storage and Networking with The Clipper Group.** He brings over seven years of experience in the computer industry working in sales, market analysis and positioning, and engineering. Mr. Fisch worked at EMC Corporation as a marketing program manager focused on service providers and as a competitive market analyst. Before that, he worked in international channel development, manufacturing, and technical support at Extended Systems, Inc. Mr. Fisch earned an MBA from Babson College and a Bachelor's degree in electrical engineering from the University of Idaho.

- ***Reach Michael Fisch via e-mail at Mike.Fisch@clipper.com or at 781-235-0085 Ext. 25. (Please dial "1-25" when you hear the automated attendant.)***

Regarding Trademarks and Service Marks

The Clipper Group Navigator, **The Clipper Group Explorer**, **The Clipper Group Observer**, **The Clipper Group** *Captain's Log*, and *"clipper.com"* are trademarks of The Clipper Group, Inc., and the clipper ship drawings, *"Navigating Information Technology Horizons"*, and *"teraproductivity"* are service marks of The Clipper Group, Inc. The Clipper Group, Inc., reserves all rights regarding its trademarks and service marks. All other trademarks, etc., belong to their respective owners.

Disclosure

Officers and/or employees of The Clipper Group may own as individuals, directly or indirectly, shares in one or more companies discussed in this bulletin. Company policy prohibits any officer or employee from holding more than one percent of the outstanding shares of any company covered by The Clipper Group. The Clipper Group, Inc., has no such equity holdings.

Regarding the Information in this Issue

The Clipper Group believes the information included in this report to be accurate. Data has been received from a variety of sources, which we believe to be reliable, including manufacturers, distributors, or users of the products discussed herein. The Clipper Group, Inc., cannot be held responsible for any consequential damages resulting from the application of information or opinions contained in this report.